

IN THE CLAIMS

1.(currently amended): A battery recharging device for batteries (6), and for the display of battery packs (5) at a point of sale, said battery charging device comprising at least a supporting element (1, 17, 51), which includes a series of housings (2, 18) for the insertion and/or linking of battery packs (5) at a point of sale, and means (20, 30) for the charging, recharging and/or maintenance of the electric charge, electrically connected to said housings (2, 18) wherein each pack of batteries (5) ~~of batteries (6)~~ contains batteries (6), connected in series to each other, of which at least two terminals (7, 8, 80) are accessible from the outside of the pack of batteries (5) for connection to the recharging and/or maintenance means (20, 30) of an electric charger, wherein said at least one supporting element (1, 17, 51) comprises automatic selection and supply means of at least one of said battery packs (5), driven by an electronic panel (50), when a selection is effected by a user by means (10, 11, 12, 32, 33, 34) situated on the outer casing (35) of the recharging device wherein said at least one supporting element (1, 17, 51) includes a series of columns (13, 14, 16, 20, 26, 37), inside which the battery packs (5) are introduced into appropriate slits (18) and kept in a horizontal position by means of shelves (15), wherein said electronic panel (50) selects at least one battery pack (5) containing the most highly charged batteries (6) of the type selected.

2. (previously presented): The battery recharging device according to claim 1, characterized in that it also comprises at least one suitable housing (4) for checking the charge level of battery packs (5), said suitable housing (4) being adapted to be used for the temporary support of one of said battery packs (5), whose charge level is to be checked.

3. (canceled)

4. (canceled)

5. (previously presented): The battery recharging device according to claim 1, characterized in that each of said housings (2, 18) comprises signaling means, suitable for indicating the charge level and/or the arrival at the maximum charge level of the battery pack (5) that is inserted.

6. (previously presented): The battery recharging device according to claim 1, characterized in that said two terminals (7, 8, 80) are situated at different distances, in order to be able to automatically select the necessary charge levels for the various types of batteries (6) to be charged.

7. (previously presented): The battery recharging device according to claim 1, characterized in that said at least one supporting element (1, 17, 51) comprises, in correspondence with each seat or housing (2, 18), at least one metallic body (27), pushed by at least a first elastic conductor element (28), which ensures electric contact with said at least two terminals (7, 8, 80) of the battery pack (5), whereas at least a second conductor element (29) produces the electric contact with said recharging means of the electric charger.

8. (previously presented): The battery recharging device according to claim 1, characterized in that at least one of said terminals (7, 8, 80) contacts at least one spring nail (38), in turn electrically connected to said recharging means (20, 30) of the electric charger.

9. (previously presented): The battery recharging device according to claim 8, characterized in that said battery pack (5) is held in position ~~thanks to~~ by a notch (42) of said at least one supporting element (1, 17, 51), which is engaged with an incision situated on the packaging (5).

10. (previously presented): The battery recharging device according to claim 1, characterized in that said battery pack (5) has at least one guiding wing (46) for insertion inside said housings (2, 18) and is also equipped with at least one inductor element (44) and/or at least one rectifier diode (45), said at least one supporting element (1, 17, 51) comprising at least one magnetic circuit (47), with polar expansions, on which at least one coil (48) is wound, so that, upon insertion of the battery pack (5) in the respective housing (2, 18), said inductor element (44), inserted between said polar expansions of the magnetic circuit (47), forms an inductive magnetic coupling with said coiling (48), so as to transfer the electric energy, supplied by an alternating current generator (49) and rectified by said diode (45), to the batteries (6) of the battery pack (5).

11. (canceled)

12. (canceled)

13. (canceled)

14. (previously presented): The battery recharging device according to claim 1, characterized in that said automatic selection and supply means comprise at least one pin (91) of an expeller, kept in rest position by at least a first elastic element (92), and at least one coil, which, after the passage of an electric current, generates an entrainment force on said pin (91) of the compression of said first elastic element (92), which produces the expulsion of the battery pack (5) and the falling of said battery pack (5) onto a collection surface (36).

15. (previously presented): The battery recharging device according to claim 14, characterized in that said at least one supporting element (1, 17, 51) is electrically connected, by means of at least a second elastic element (96), with a body (94), associated with at least a third elastic element (95) and suitable for contacting at least one terminal (80) of the battery pack (5) for the charging of the batteries (6) contained therein.

16. (previously presented): The battery recharging device according to claim 1, characterized in that said battery pack (5) is made up of two symmetrical shells (23, 24) which mechanically withhold the batteries (6) and leave the relative terminals free, so that each battery (6) can be charged individually.

17. (previously presented): The battery recharging device according to claim 1, characterized in that said battery packs (5) are stacked on top of each other, in correspondence with each column (13, 14, 20, 16, 26, 37).

18. (previously presented): The battery recharging device according to claim 1, characterized in that said automatic selection and supply means comprise at least one motor (28), whose rotation produces the moving of at least one pushing element (27) which causes the release of each

battery pack (5) from the withholding elastic elements (29, 43).

19. (previously presented): The battery recharging device according to claim 1, characterized in that said automatic selection and expulsion means comprise at least one pushing element (27B), moved by at least one belt (26B), in turn activated by at least one motor (28B).

20. (previously presented):: A battery recharging device for batteries (6), and for the display of battery packs (5) at a point of sale, said battery charging device comprising at least a supporting element (1, 17, 51), which includes a series of housings (2, 18) for the insertion and/or linking of battery packs (5) at a point of sale, and means (20, 30) for the charging, recharging and/or maintenance of the electric charge, electrically connected to said housings (2, 18) wherein each pack of batteries (5) of batteries (6) contains batteries, connected in series to each other, of which at least two terminals (7, 8, 80) are accessible from the outside of the pack of batteries (5) for connection to the recharging and/or maintenance means (20, 30) of an electric charger, wherein said at least one supporting element (1, 17, 51) comprises automatic selection and supply means of at least one of said battery packs (5), driven by an electronic panel (50), when a selection is effected by a user by means (10, 11, 12, 32, 33, 34) situated on the outer casing (35) of the recharging device wherein said at least one supporting element (1, 17, 51) includes a series of columns (13, 14, 16, 20, 26, 37), inside which the battery packs (5) are introduced into appropriate slits (18) and kept in a horizontal position by means of shelves (15), and wherein said electronic panel (50) selects at least one battery pack (5) containing the most highly charged batteries (6) of the type selected wherein said battery pack (5) is made up of two symmetrical shells (23, 24) which mechanically withhold the batteries (6) and leave the relative terminals free, so that each battery (6) can be charged individually and wherein said battery packs (5) are stacked on top of each other, in correspondence with each column (13, 14, 20, 16, 26, 37) and wherein said automatic selection and supply means comprise at least one motor (28), whose rotation produces the moving of at least one pushing element (27) which causes the release of each battery pack (5) from the withholding elastic elements (29, 43) and said automatic selection and expulsion means comprise at least one pushing element (27B), moved by at least one belt (26B), in turn activated by at least one motor (28B).